

## ABSTRACT

### Process to expand data density

The invention relates to a process for transmission of information between at least two devices for example a transmission compliant with the MIDI standard.

Elements of information which are succeeding each other in a time sequence are passed along over an electrical or optical support.

The process does not interfere with the existing UART based communication systems of the devices, and allows nevertheless the increase of the amount of various distinct messages which it is able to convey.

The process comprises

- generating a serial message coded by means of a time sequence of binary transitions called bits;
- reducing the time length of all bits in the message by changing them into shorter bits called "reduced bits", in order to insert additional bits whose half duration falls at the moment in time where the transitions between unchanged bits occurred when no additional bits are inserted
- keeping the half duration point of all reduced data bits to the same place as they were in the unchanged message
- keeping the total duration of the message containing the additional bits identical to the total length of the unchanged message.